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**7.2 Cell Structure**

Lesson Objectives

Describe the structure and function of the cell nucleus.

Describe the role of vacuoles, lysosomes, and the cytoskeleton.

Identify the role of ribosomes, endoplasmic reticulum, and Golgi apparatus in making proteins.

Describe the function of the chloroplasts and mitochondria in the cell.

Describe the function of the cell membrane.

**BUILD Vocabulary**

**A.** The chart below and on the next page shows key words from the lesson with their definitions. Complete the chart by writing a strategy to help you remember the meaning of each term. One has been done for you.

**Term**

**Definition**

**How I’m Going to Remember the Meaning**

Cell wall

Structure around plant cells, fungus cells, and some bacterial cells that supports and protects

***A wall surrounds and protects a building like a* cell wall *surrounds and protects a cell.***

Centriole

Structure in animal cells that helps organize cell division

Chloroplast

Structure in plant cells that captures the sun’s energy and changes it into chemical energy

Cytoplasm

Fluid portion of the cell outside the nucleus

Cytoskeleton

Network of protein filaments that gives a cell its shape and organizes its organelles

Endoplasmic reticulum

Internal membrane system of a cell where proteins are assembled

Golgi apparatus

Series of flattened sacs that prepares proteins and other materials for export from the cell

*Continued on next page*

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**Term**

**Definition**

**How I’m Going to Remember the Meaning**

Lysosome

Enzyme-filled structure that breaks down complex molecules or worn-out organelles

Mitochondrion

Organelle that changes the chemical energy in food into a form that is easier for the cell to use

Organelle

Structure within a cell that acts like a specialized organ

Ribosome

Structure that assembles proteins

Vacuole

Saclike structure that stores materials like water and nutrients

**B.** As you work through this lesson, you may find these terms in the activities. When you need to write a key term or a definition, **highlight** the term or the definition.

**BUILD Understanding**

**Venn Diagram** A Venn diagram is made up of overlapping circles. It is a useful tool for comparing two or even three topics.

*Use terms to complete the Venn diagram about prokaryotes and eukaryotes.*

*Terms: cell membrane, cell wall, centriole, chloroplast, cytoplasm, cytoskeleton, DNA found in cytoplasm, endoplasmic reticulum, Golgi apparatus, lysosome, mitochondria, nucleus containing DNA, ribosome, vacuole*

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**BUILD Connections**

**The Cell As a Living Factory** An analogy takes two things that seem to be different and shows how they can be similar.

**1.** If the cell were a factory, what part would serve as the main office?

**2.** Which cell part would provide electricity?

**3.** With a partner, discuss how the actions of the forklifts are related to actions in cells.

**Cell Organization**

*Follow the directions.*

**1.** Draw and label a plant cell labeling 10 cell parts.

**2.** Draw and label an animal cell labeling 10 cell parts.